

# Timber Harvest in Wisconsin



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In 2009, Wisconsin produced 4.9 million cords of roundwood annually, most of which was aspen and maple (hard and soft). Less than half of this is pulpwood, 21% in sawlogs/veneer and 25% residential fuelwood. The state produced about 1.2 million cords of residential fuelwood, almost half of which was red and white oak.

On public lands, 3% of county forest, 1.5% of state forest and only 1.1 % of national forest accessible acres were harvested in 2012. Harvested volume and value per harvested acre is much lower on forest service lands compared to both state and county land.

There are approximately 617 million oven-dry tons of biomass in Wisconsin, 57% of which is located in the northern part of the state. About  $\frac{1}{3}$  of this is considered merchantable.

- [\*How much pulpwood do we produce?\*](#)  
Pulpwood production by species and region of the state
- [\*How much fuelwood do we produce?\*](#)  
Fuelwood production by species and region of the state
- [\*How much wood do we produce on state and county lands?\*](#)  
Number of sales, acreage, pulpwood and sawtimber volume and value of sales
- [\*How much wood do we produce on national forest lands?\*](#)  
Volume of roundwood by product
- [\*What kind of forest products do we harvest?\*](#)  
Roundwood production by species group and product
- [\*How much woody biomass do we have and where?\*](#)  
Biomass (oven-dry tons by species group and region of the state)



*"How much pulpwood do we produce?"*

**Pulpwood production by species and region of the state**

Table 1. Pulpwood production by species (standard cords) 2004 and 2009.

Species	2004	2009	Percent change
Ash	84,860	77,517	-9%
Aspen/ balsam poplar	620,846	335,126	-46%
Balsam fir	73,371	88,356	20%
Basswood	78,021	28,630	-63%
Beech	97,394	4,443	-95%
Cherry	10,052	3,621	-64%
Cottonwood	--	24,752	--
Elm	18,519	16,461	-11%
Hard maple	454,573	408,897	-10%
Hemlock	29,586	13,535	-54%
Hickory	1,233	970	-21%
Jack pine	155,061	92,559	-40%
Northern white-cedar	46	1,011	2093%
Other hard-woods	2,860	392	-86%
Other pine	--	1,883	--
Paper birch	268,733	202,803	-25%
Red oak	139,102	147,285	6%
Red pine	219,151	228,218	4%
Soft maple	407,551	246,852	-39%
Spruce	57,119	86,666	52%
Tamarack	15,894	6,839	-57%
White oak	35,429	17,701	-50%
White pine	55,658	96,652	74%
Yellow birch	37,269	21,017	-44%
<b>Grand Total</b>	<b>2,862,329</b>	<b>2,152,188</b>	<b>-25%</b>

\*Standard cords unpeeled based on 2004 and 2009 data

Source: Ronald Piva, USDA Forest Service, Northern Research Station, St. Paul MN

Pulpwood production decreased 25% from 2004 to 2009 (Table 1). Production of beech, cherry, basswood, tamarack, hemlock and white oak pulpwood decreased by at least 50% from 2004 levels.

The only species for which pulpwood production had increased in the same period were white pine, spruce, red oak , northern white cedar, balsam fir and red pine (Chart 1).

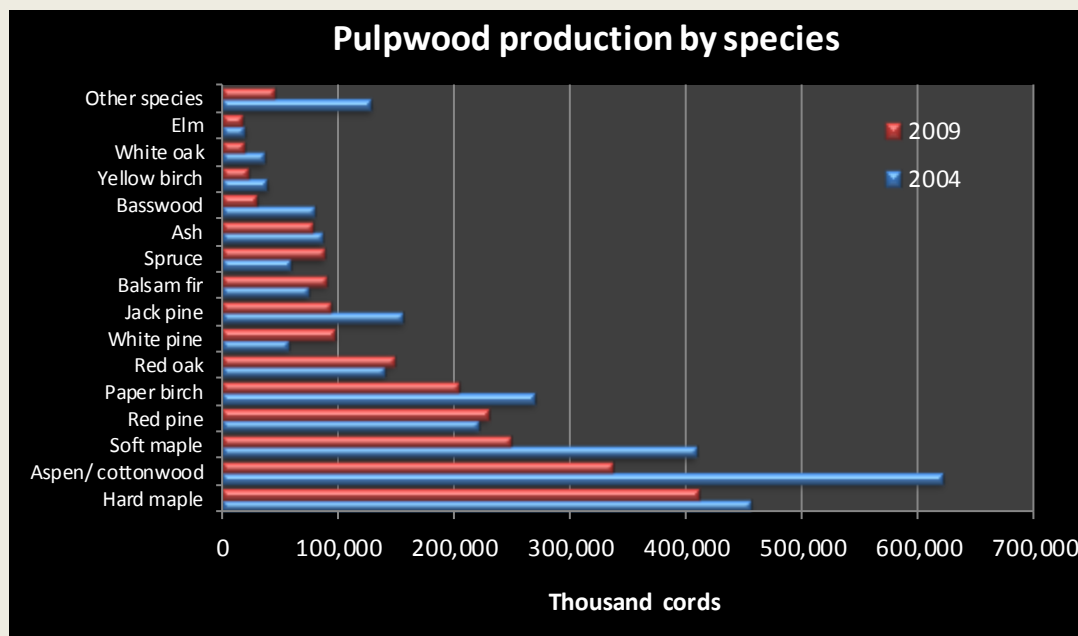


Chart 1. Pulpwood production by species in 2004 and 2009

Source: Ronald Piva, USDA Forest Service, Northern Research Station, St. Paul MN



*"How much fuelwood do we produce?"*

## Fuelwood production by species and region of the state

Table 2. Residential fuelwood production by region of the state (standard cords)

Species	Central	North west	South east	North east	South west	Total
Red oak	150,046	101,444	85,838	71,692	73,437	482,457
Aspen/balsam poplar	19,826	40,788	7,411	67,859	4,217	140,101
Hard maple	25,685	45,677	5,102	47,665	5,812	129,940
White oak	38,756	10,167	35,050	1,680	14,150	99,803
Soft maple	19,847	27,436	23,753	19,426	8,011	98,472
Paper birch	1,673	23,401	19,701	19,329	5,097	69,202
Elm	11,196	4,664	20,972	13,466	11,733	62,031
Ash	2,782	7,995	31,005	1,594	4,888	48,265
White pine	3,612	1,201	15,327	476	1,644	22,260
Jack pine	8,126	6,177	19	2,235	822	17,379
Yellow birch	1,445	5,703	--	4,441	572	12,162
Red pine	2,696	349	8	923	7,810	11,786
Other hardwoods	136	6	6,811	241	78	7,272
Black walnut	539	--	--	--	5,155	5,694
Hickory	266	1	2,153	1,910	62	4,391
North white-cedar	202	--	4,172	5	--	4,379
Black cherry	13	1	2,337	23	1,844	4,218
Basswood	40	1,205	836	2,098	--	4,179
Beech	--	--	100	472	--	572
Spruce	--	--	--	250	--	250
Cottonwood	--	--	189	--	--	189
<b>Total</b>	<b>286,886</b>	<b>276,212</b>	<b>260,785</b>	<b>255,785</b>	<b>145,332</b>	<b>1,225,000</b>

Source: Ronald Piva, USDA Forest Service, North Research Station, St. Paul MN

White and red oaks account for almost half of fuelwood production with maple and aspen making up another 22% (Chart 2). Northwest and Central Wisconsin produce about half of all fuelwood (Table 2).

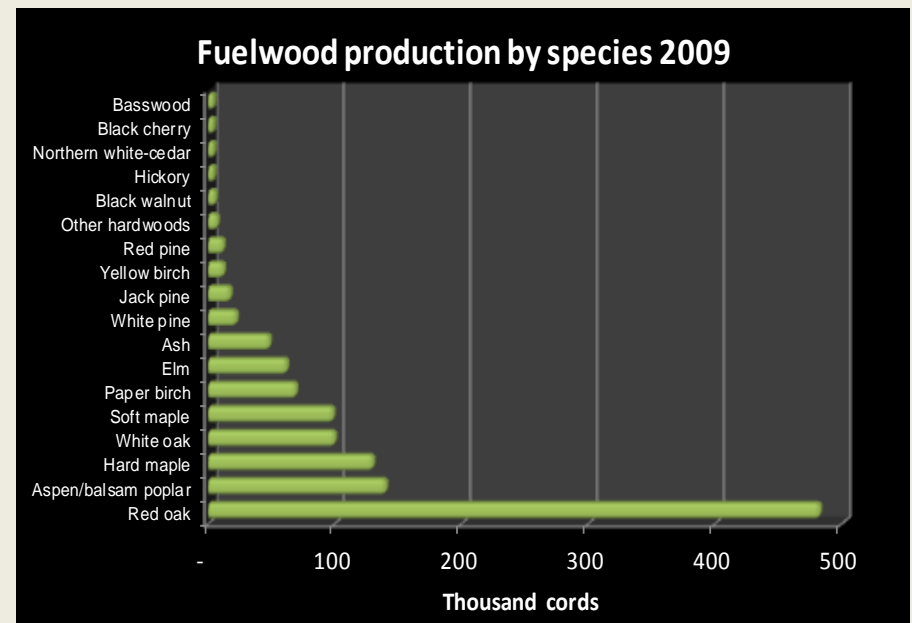


Chart 2. Fuelwood production by species 2009 data ( thousand cords).

Source: Ronald Piva, USDA Forest Service, Northern Research Station, St. Paul MN



*"How much wood do we produce on state and county lands?"*

### Timber sales on state and county lands in Wisconsin

State and county forestlands generated about \$40 million worth of timber revenue in 2012 (Table 3). Although county lands accounted for 93% of total sales, sales on state forests are larger (105 acres/sale compared to 75 acres/sale on county lands) and generate higher revenues per sale and per acre.

Of the 2.4 million acres of county forests, 59,624 were harvested in 2012 (2.5%) and of the approximately one million acres of state land, 14,177 were harvested (1.4%) in 2012.

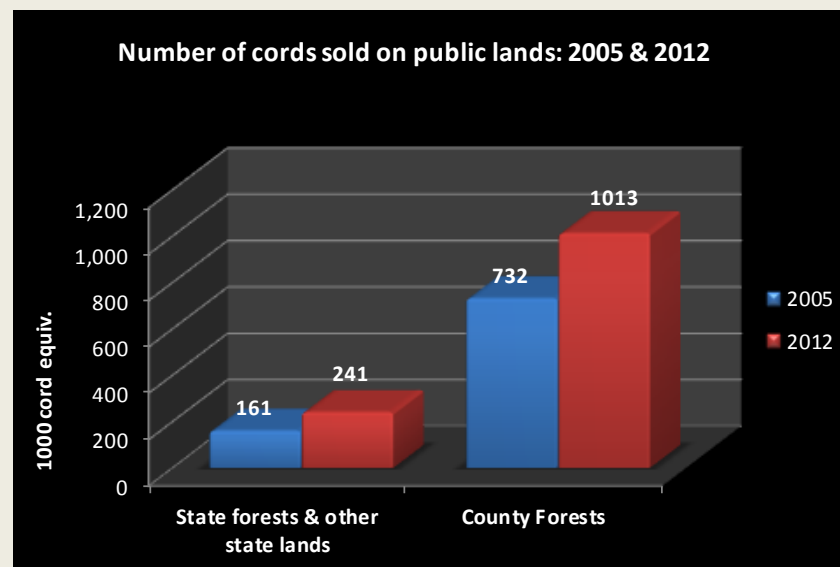


Chart 3. Cord sales on public lands.

Source: Joe Schwantes, County forest specialist, Dept of Natural Resources, Madison WI

Table 3. 2012 completed sales on public lands ("B" notices)

	# Sales completed	# Acres harvested	Acres per sale	# MBF sold	# Cords sold	All products: # Cord Equiv	Stumpage value	Value per sale
<b>State Forests</b>	93	9,734	105	2,510	147,326	152,970	\$6,157,909	\$66,214
<b>Other State Lands</b>	97	4,443	46	2,059	83,787	88,347	\$2,566,562	\$26,459
<b>County Forests</b>	798	59,624	75	20,043	968,472	1,013,008	\$37,092,403	\$46,482
<b>Total</b>	<b>950</b>	<b>66,574</b>	<b>70</b>	<b>26,471</b>	<b>996,075</b>	<b>1,055,292</b>	<b>\$40,022,121</b>	<b>\$42,129</b>

Compiled from Reports 36A & 28B CY12 by Joe Schwantes, County forest specialist, Dept of Natural Resources, Madison WI

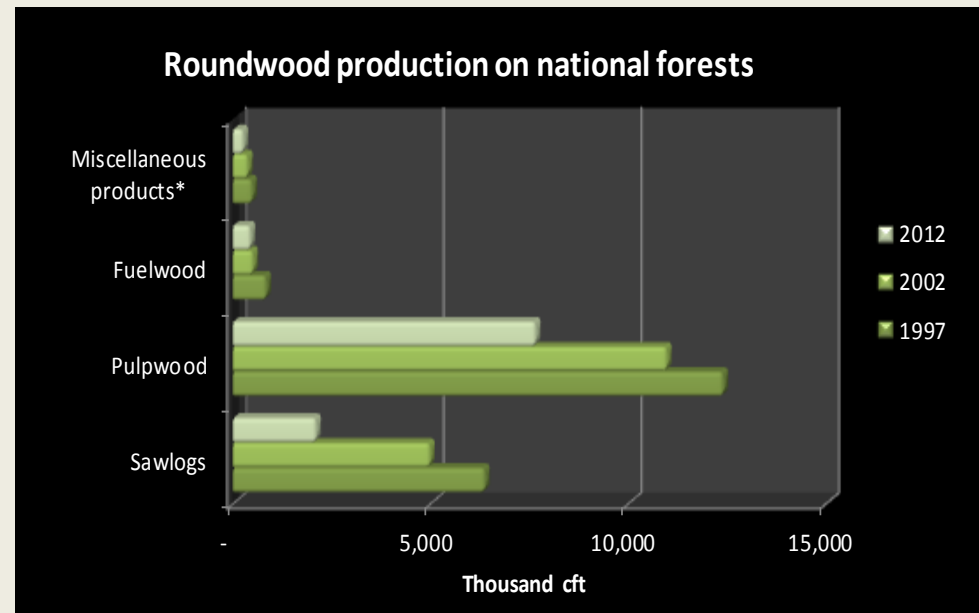
## *“How much wood do we produce on national forest lands?”*

### Volume of roundwood by product on federal lands

Only 9,315 acres were harvested on the Chequamegon and Nicolet National Forests in 2012 compared to over 73,000 acres on state and county lands (Table 4). Total stumpage value in 2012 was about \$4.3 million on federal lands, compared to a total of \$45.8 million on state and county lands.

A comparison between the federal, state, and county shows that not only are the national forests harvesting only 1.1% of their accessible acreage annually (compared to an average 2.3% for state and county), but the average volume and sale value per harvested acre are also lower on federal lands.

Harvest on the national forests by product in 2012 was: sawlogs – 2,099 mcf, pulpwood – 7,654 mcf, fuelwood – 436 mcf and miscellaneous products – 260 mcf (Chart 4).



\*Miscellaneous products include posts and pilings and veneer.

Chart 4 . Roundwood production on national forest lands by product over time. Source: Kristi Keach, Timber Resource Specialist, USDA Forest Service, Chequamegon-Nicolet National Forests (2012 data)

Table 4. A comparison of harvest levels on federal, state, and county lands (2012).

Landowner	Total acres forested	Total acres harvested	Percent of forested acres that are harvested	Volume harvested (cord equiv)	Volume per harvested acre (cord equiv/acre)	Total sale value	Sale value per harvested acre
<b>Forest service<sup>1</sup></b>	1,319,000 total (864,000 legally accessible)	9,315	0.7% of total acres (1.1% of accessible)	123,375 (59,751 MBF)	13.24	\$4,279,271	\$459
<b>State<sup>2</sup></b>	962,402	14,177	1.5%	241,317	17.02	\$8,724,471	\$615
<b>County<sup>2</sup></b>	1,989,975	59,624	3.0%	1,013,008	16.99	\$37,092,403	\$622

<sup>1</sup>Kristi Keach, Timber Resource Specialist, USDA Forest Service, Chequamegon-Nicolet National Forests (2012 data)

<sup>2</sup>Source: Joe Schwantes, County forest specialist, Dept of Natural Resources, Madison WI (2012 CY data)





## *"What kind of forest products do we harvest?"*

### Wisconsin's roundwood production by species group and product

Total roundwood production was approx. 373 million cft in 2009, of which 86 million is fuelwood and 287 million is industrial roundwood (Table 5). Pulpwood accounts for 46% of roundwood (Chart 5). Sawlogs and veneer make up an additional 22% of production. Both have fallen about 23% since 2003. Fuelwood production has more than doubled.

Table 5. Total roundwood production (thousand cft) by species group and product (2009)

Species	Pulpwood	Compos panels	Saw logs	Veneer logs	Miscel products	Total	Resid fuelwd <sup>a</sup>	State total
Ash	6,124	52	2,234	59	66	8,535	3,379	11,914
Aspen	26,475	21,634	8,186	101	256	56,653	9,807	66,460
Balsam fir	6,980	282	242	--	1	7,504	--	7,504
Basswood	2,262	2,572	3,015	97	7,124	15,070	293	15,362
Elm	1,300	--	242	4	1	1,548	4,342	5,890
Hard maple	32,303	312	13,494	1,209	48	47,365	9,096	56,461
Hemlock	1,069	--	269	--	0	1,339	--	1,339
Jack pine	7,312	64	4,362	1	94	11,834	1,217	13,050
Paper birch	16,021	199	1,380	432	51	18,083	4,844	22,927
Red oak	11,636	--	12,501	1,230	84	25,450	33,772	59,222
Red pine	18,029	137	15,792	0	1,308	35,266	825	36,091
Soft maple	19,501	403	3,949	39	40	23,932	6,893	30,825
Spruce	6,847	21	977	--	18	7,863	18	7,880
White oak	1,398	--	3,411	259	165	5,234	6,986	12,220
White pine	7,635	165	2,921	17	888	11,627	1,558	13,185
Yellow birch	1,660	22	1,133	44	0	2,860	851	3,711
Other species	3,469	1	2,740	507	212	6,929	1,870	8,799
<b>Total</b>	<b>170,023</b>	<b>25,865</b>	<b>76,847</b>	<b>3,999</b>	<b>10,356</b>	<b>287,089</b>	<b>85,750</b>	<b>372,839</b>

<sup>a</sup> Residential fuelwood is from the U.S. Energy Information Administration .

Source: Ron Piva, USDA Forest Service, Northern Research Station, St. Paul MN 2009 data

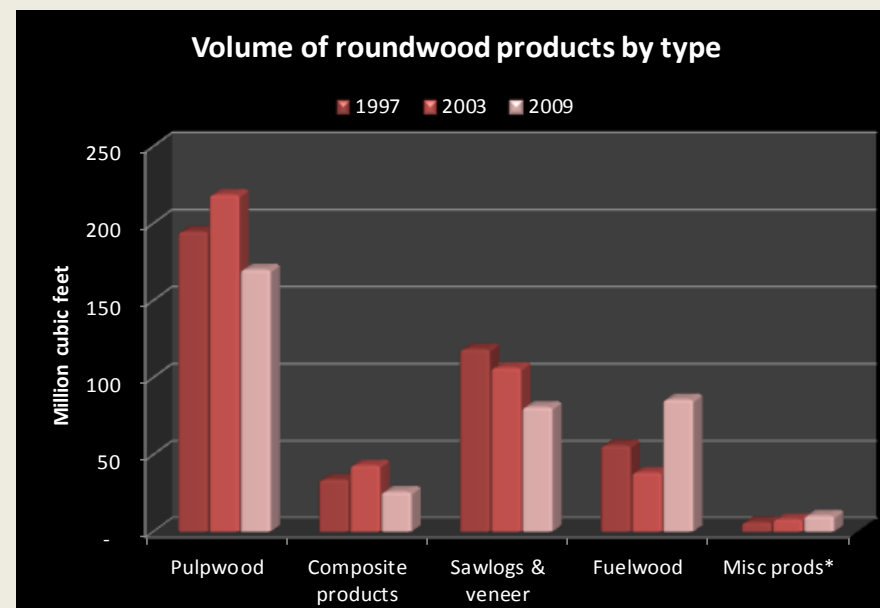


Chart 5. Volume of roundwood products, 2009 data.

\*Miscellaneous products include posts, poles and pilings.

Source: Ronald Piva, USDA Forest Service, Northern Research Station, St. Paul MN



*“How much woody biomass do we have and where?”*

### Biomass volume by unit and species group

Table 6. All live tree and sapling aboveground biomass on forestland (thousand oven-dry short tons) by species group and region of the state (2012 FIA data).

Species group	Northeast	Northwest	Central	Southwest	Southeast	Total
Ash	9,422	15,081	6,244	4,427	8,779	<b>43,953</b>
Aspen	18,125	25,389	7,430	4,118	2,141	<b>57,203</b>
Balsam Fir	5,493	5,080	392	7	104	<b>11,076</b>
Basswood	6,190	6,918	2,361	3,686	2,205	<b>21,360</b>
Elm	1,179	1,637	1,819	5,717	2,469	<b>12,821</b>
Hard maple	34,463	31,837	5,521	6,749	4,000	<b>82,571</b>
Hemlock	5,462	3,115	711	.	413	<b>9,701</b>
Jack pine	1,236	1,987	2,530	103	25	<b>5,882</b>
Paper Birch	5,144	6,669	2,269	2,237	1,083	<b>17,401</b>
Red oaks	14,711	23,509	28,875	21,139	5,671	<b>93,905</b>
Red pine	10,780	8,610	8,998	1,351	758	<b>30,497</b>
Soft maple	18,870	28,842	19,981	7,392	3,948	<b>79,033</b>
Spruce	5,129	4,479	585	249	357	<b>10,799</b>
White oaks	701	6,202	11,132	14,778	7,087	<b>39,900</b>
White pine	9,826	6,426	9,378	2,108	1,590	<b>29,328</b>
Yellow birch	3,635	5,363	1,064	104	455	<b>10,621</b>
Minor species	14,429	11,384	8,553	20,373	14,992	<b>69,730</b>
<b>Grand Total</b>	<b>164,795</b>	<b>192,530</b>	<b>117,843</b>	<b>94,536</b>	<b>56,077</b>	<b>625,781</b>

There were 626 million oven-dry tons (ODT) of biomass on timberland in Wisconsin in 2012 (427 of which was classified as merchantable). This is an increase of 90 million ODT or 17%, since 1996. As with volume, most biomass is located in northern Wisconsin (57%) with lesser amounts in southern (24%) and central (19%) parts of the state (Chart 6).

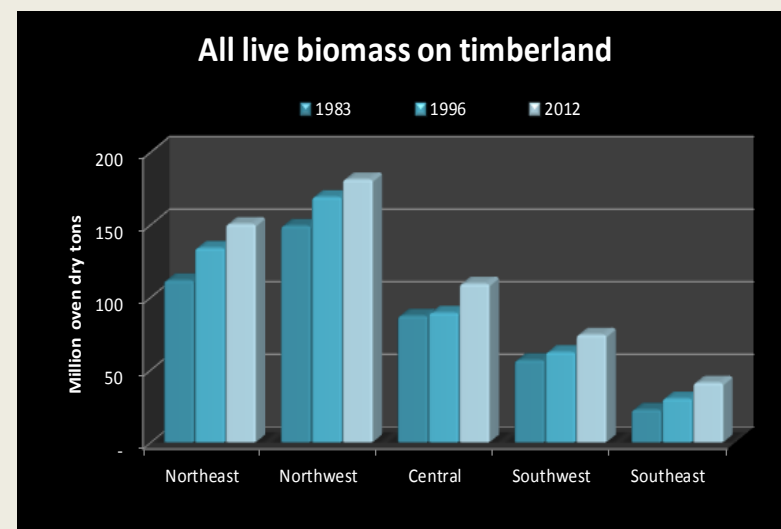


Chart 6. All live biomass on timberland (million oven-dry tons).  
Source: USDA Forest Inventory and Analysis data: 1983, 1996, and 2012.

For a table of **Biomass by County for 2012** go to:

<http://dnr.wi.gov/topic/ForestBusinesses/documents/tables/BiomassByCounty.pdf>